

Claims

[c1] What is claimed is:

1. A method for decoding address data of an optical disc drive for decoding an input wobble signal into an address data unit signal, the optical disc drive comprising a phase lock loop, a cosine signal generator, a multiplier, an accumulator, a phase data processor and an address data unit detector, the method comprising:

(a) converting a wobble carrier frequency signal output by the phase lock loop into a wobble carrier frequency signal with the same phase as the input wobble signal using the cosine signal generator;

(b) multiplying the wobble frequency signal, output by the cosine signal generator, with the input wobble signal to obtain a product signal using the multiplier;

(c) accumulating the product signals at each clock to obtain a quotient summation signal using the accumulator;

(d) determining phase changes of the input wobble signal according to whether the quotient summation signal is positive or negative to obtain a phase change signal using the phase data processor; and

(e) comparing the phase change signal with the plurality of address data patterns using the address data unit de-

tector, and determining an address data unit signal according to the address data pattern closest to the phase change signal.

[c2] 2. The method of claim 1, wherein Step (e) comprises comparing the phase change signal with the values of the plurality of address data patterns of each clock; when there is an address data pattern having the same value as the phase change signal, adding a count number to the address data pattern; and eventually using the address data pattern having the most count numbers as the address data unit signal.

[c3] 3. The method of claim 1, further comprising:
(f)sequencing the values of the quotient summation signals at each clock using the address data unit detector, and selecting a plurality of clocks having smaller quotient summations in order to obtain a sync pattern; and
(g)comparing the sync pattern with the plurality of address data patterns using the address data unit detector, and using the ADIP pattern closest to the sync pattern as the address data unit signal.

[c4] 4. The method of claim 1, wherein the optical disc drive is a DVD+R/RW drive and the address data is address in pre-groove (ADIP).

[c5] 5. A device for implementing the method of claim 1.